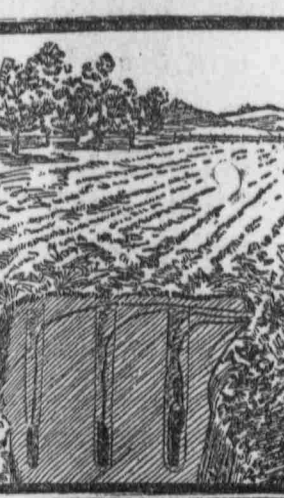


## RESTING NEW SOIL EXPERIMENTS.

States Government Using Ingenious  
Instruments.

Division of soils of the United States Department of Agriculture has described a new instrument now for investigating the properties of soils. This is a great time and having apparatus, giving accurate and reliable results, which other methods require months to obtain. Physical properties of soils are investigated by plant physiologists to the greatest importance in plant life. Even in the consideration of soil conditions it is now generally considered that for most plants conditions of the soil hold equal with atmospheric conditions. A temperature in the soil under favorable conditions promotes extensive development; a high atmospheric temperature under equally favorable conditions favors a heavy growth of plants. A deficiency in water of the soil or soil is attended with disastrous results.



Another buried in the soil depends on the amount of moisture present between the carbon plates or electrodes. This resistance is measured. The illustration shows the instrument as used in the field, with the carbon electrodes and temperature cells placed. The carbon electrodes and temperature cells may be buried in the soil at the beginning of the season and remain undisturbed throughout the year. The moisture record obtained consequently deals with the variation in moisture contents in the same portion of soil. This is one of the advantages of the method, since it has been shown that the moisture contents of a seemingly uniform soil may vary as much as four per cent. within an area of one square rod. Consequently, in order to obtain a consistent record of the change in water it is necessary to deal with the same sample of soil, which can only be done by this electrical method.

The scale of the instrument is arranged on a decimal plan, so that the various soil properties can be determined directly from the scale of the instrument.

It was observed by Professor W. that soil areas of the Connecticut Valley were practically identical as regards texture and water content with certain areas in Florida upon which the finest of cigar wrappers are being raised from Sumatra seed. Experiments were accordingly made on one of the Connecticut areas, using the same seed and methods of cultivation and curing employed in Florida, with the most satisfactory results.

Should the more extensive experiments now in progress support the earlier work, as there is every reason to expect, the result will be to increase greatly the area adapted to the growth of the finest quality of cigar wrappers known, and there will be raised in this country tobacco now imported to the amount of \$6,000,000 annually.

England's Scottish Gardeners. To a Scotsman a Scotsman succeeds as head gardener to the king at Sandringham. Mr. Archibald McKellar, who has held the position for many years, has been promoted to Windsor Castle, and his place at His Majesty's Norfolk establishment has been filled by a fellow countryman, Mr. T. H. Cooke. Mr. McKellar belongs to Lichfield, in Argyllshire, and before coming to Sandringham he had charge of the beautiful gardens of Floors, the seat of the Duke of Roxburgh. The gardens at Sandringham are very extensive, but they are laid out. The garden at Sandringham is historically more interesting than there is a "gardyn" in Scotland, although it is not as old as the gardens of Sandringham.

## THE ROUND TABLE OF KING ARTHUR.

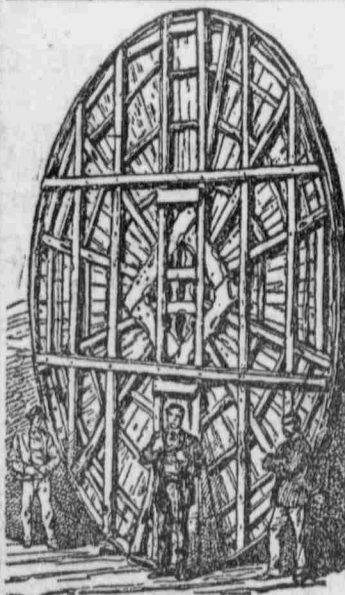
The famous Round Table of King Arthur is still preserved in the great hall that was attached to the ancient castle built by William the Conqueror at Winchester in 1235, and it is one of the most interesting relics in all England. The castle of Winchester was destroyed by fire several years ago, but the hall in which Parliament sat for 400 years is still preserved in its original condition, and a secret "trough," as they call it, which was bored through the wall and enabled the king to hear what was going on in Parliament as he sat in his chamber, is still pointed out to visitors. The castle was the residence of all the early Norman kings. Richard Coeur de Lion was received there by his nobles when he returned from captivity. All the Edwards resided there, there Henry VIII. entertained the great emperor, Charles V. of Spain; there Queen Mary entertained Philip II. of Spain until they were married in the ancient cathedral near by, and there Sir Walter Raleigh was tried and condemned to death after his return from his fruitless explorations in South America.

Winchester is one of the most ancient cities of England, and was set-



tled in the year 900 B. C. Julius Caesar lived there while he was in England, and the Roman emperor Vespasian made it his capital. Five hundred years after the birth of Christ the city was captured by Cerdic, who made it the capital of the Saxon dynasty, and in 827, in the cathedral, Egbert was crowned as the first king of all England.

The round table is in an excellent state of preservation and is fastened against the wall at one end of the great room where John Harding, the chronicler, who lived from 1378 to



TOP OF KING ARTHUR'S ROUND TABLE.

1465, described it. Henry VIII. repaired it, and placed an iron band around the outside like the tire of a wheel, to keep it together. It was a great curiosity in his day, when it must have been at least 600 years old. The under part of the table is a network of braces; the upper part is laid off into twenty-four sections, each bearing the name of the knight who occupied it, and you can see the names of Galahad, Launcelot and others mentioned in Tennyson's poem. The chroniclers say that the table has been hanging in its present place since the year 1283, but has been taken down on several occasions. The last time was when the castle burned. The citizens of Winchester were determined to save it, and a hundred men were engaged in removing it from the wall, but when they got it to the floor they found that it was too large to be taken out through the doors and the fire was extinguished before they could take it to pieces.

The interest on the national debt for last year cost each person forty-four cents.

A white disc a foot across can be seen with the naked eye at a distance of 17,250 feet.



## CHATS WITH GIRLS AND BOYS

Names Indians Give to the Months. The moon is the Indian's calendar. He reckons time by its changes, and long before the white man came to America the red man had a pretty clear idea of a month of time. The moon goes through four changes in four weeks. From full moon around to full moon again is, therefore, nearly one month, or as the Indian called it—moon. After all, the English word month means moon, and is derived from that word. So it seems the moon is responsible for the idea of month. But the Indian named his months or moons from the things that most appealed to him—the weather, the plants, the hunt, etc. Here are the names by which he knew them:

January.....The Cold Moon  
February.....The Snow Moon  
March.....The Green Moon  
April.....The Moon of Plants  
May.....The Moon of Flowers  
June.....The Hot Moon  
July.....The Moon of the Deer  
August.....The Sturgeon Moon  
September.....The Fruit Moon  
October.....The Traveling Moon  
November.....The Beaver Moon  
December.....The Hunting Moon  
All Indian tribes do not have the same name for the same month, however, as it varies according to the occupation or locality of each tribe. June to some was the Strawberry Moon, August the Ripe Moon, and so on.—Chicago Record-Herald.

## A Poetry Game.

Here is a delightful and interesting game for an older member of the family to play with a group of children.

Take as many sheets of paper as there are children, and the older person must then write on each sheet several stanzas of poetry, leaving a wide space between the lines. Then cut the sheets into strips of one line of poetry each. The strips containing the first line of each stanza are given to the children, who then leave the room, while all the other strips are hidden in mysterious places about the room. When they return the children proceed to hunt for the slips necessary to complete the stanza of poetry, the first line of which they hold in their hand. On the slip which is guiding them is a number indicating the number of lines which complete the stanza, so, for instance, if the stanza is of four lines, there will be the number four on the slip given to the child, which will tell her there are three more slips to look for.

It is desirable in the beginning to select very simple and familiar poetry, so that the game may not be too difficult, and the children may have the fun of fitting their slips together when they find them, and when all are found, each one reads her stanza aloud. But this is a game that will entertain old as well as young children, and will be found a most excellent way to memorize poetry.—Home Magazine.

## The Automaton Chess-Player.

Tudor Jenks, writing of "A Modern Magician" (Robert Houdin) in the St. Nicholas, has this to say of a famous trick of one of Houdin's predecessors. This was the "Automaton Chess-player" that had once set all Europe guessing. Houdin explains this trick. The figure was a Turk, apparently too small to hold a man inside, and it played chess successfully against the best players in the world—being rarely beaten. But the whole contrivance was a mere deception. The figure was moved by a Polish officer, a refugee who had lost both legs in battle, and was therefore able to pack himself snugly into the hollow figure or into the chest upon which it sat. While the inside of the Turk's body was examined the officer was stowed in the box below, and he climbed up into the Turk when the box was inspected.

Thus hidden, the officer played chess against Catharine of Russia while that Empress was offering a reward for his capture. It is said the imperial player cheated, whereupon the mechanical Turk lost his mechanical temper and swept the chessmen from the board!

Afterward Catharine ordered the figure to be left in her palace, M. de Kempelen being thus forced to carry off the real player in a packing-box. The next day (probably after the Empress had tried in vain to discover the "missing link") Kempelen explained that the chess player required his own personal attention, and thus persuaded her to let it go!

A circumstance that helped to fool the public was the fact that the Polish officer wore artificial legs while out of the figure.

This chess automaton was once owned by Napoleon Bonaparte, came twice to this country, and in 1854 was burned in Philadelphia.

To maintain the public schools of the country costs every man, woman and child a little more than \$9.



How to eradicate mosquitoes is occupying the active brains of the scientists of the world.

Celluloid is manufactured by dissolving nitrocellulose in camphor, that is to say, forming a mixture of nitrocellulose, camphor and alcohol.

In the opinion of Sir Martin Conway, the highest mountain in America is not, as heretofore supposed, Anconima, but Anapato, in Bolivia.

Dr. Suering Berson, a member of the Meteorological Institute, Berlin, has just completed a balloon ascent, during which he reached a height of 33,500 feet. The lowest recorded temperature was forty degrees below zero Fahrenheit.

The London County Council have recently placed a new float upon the River Thames, driven by liquid fuel. By means of a large burner full steam is raised in a very few minutes. The special type of burner known as the Clarkson, which is utilized, vaporizes the oil, and then mixing the vapor with the air produces an intensely hot flame, which has the additional advantage of being almost smokeless.

"Synthol" is a chemically pure substitute for absolute alcohol. It may be used for every purpose for which alcohol is used except for internal consumption. Being chemically pure it does not have as much odor as absolute alcohol from grain or wood. It is perfectly free from color, is non-irritant to eyes or skin and has ten to fifteen per cent. more solvent power than ordinary alcohol.

During the submerged experiments with the French submarine boat "Narval," especially in those cases where the vessel has remained under water for a prolonged length of time, the crew have suffered from a peculiar sickness. It has been found impossible to account for this curious malady, and the Ministry of Marine has issued a regulation that all men in future recruited for submarine boats must undergo a rigorous medical examination. The sickness is believed to be due to constitutional causes.

An English scientist some years ago suggested that, in view of the limited supply of nitrogen, unless some methods of procuring it from other source than the earth were devised, there was danger of the soil ceasing to be productive. For this purpose he proposed that experiments should be made to discover some process of treating the nitrogen in the air so as to make it available for use. It is now announced that this has been done, and that the nitric acid thus produced is absolutely pure and available for all purposes.

## Remarkable Memory Shown by Canaries.

"St. Andreasberg people know nothing of the canary of the encyclopaedia, which can imitate perfectly the nightingale, or even enunciate some words in imitation of the human voice," declares Ida Shaper Hoxie, in telling about St. Andreasberg, "The Singing Village of Germany," in The Ladies' Home Journal. "The birds of one breed, subjected to the same influences, have songs that vary with the throat muscles and vocal chords of each individual. But so remarkable is the canary memory that a bird bred to a certain song, if removed from the cage in which he has heard it from his parent, when six weeks old, will later, when he himself begins to sing, give the same song though never having heard it in the intervening period."

## A New Use of Color.

We are timid novices in the use of color for exterior effects. We have had white houses and houses in colonial yellow; we have had brown houses, and we have had green blinds all these years of our lives. We have had inharmonious novelties of many kinds. But few men have considered the effects that may be produced by exterior colors when studied with reference to the surroundings—the natural scenery and adjacent buildings. Who paints his house with reference to the color of his neighbor's house or to its natural surroundings?—The World's Work.

## The Making of Perfumes.

Millions of flowers yield their petals annually for the making of favorite perfumes. The material for the choicest attar of roses is found in a pass of the Balkan Mountains known as the Valley of Roses. Here in the blossoming season scores of square miles of blooming damask roses red-dens the landscape, and the air is heavy with fragrance. Thousands of peasants are employed to gather the blossoms. More than half the world's supply of attar of roses comes from this valley in central Bulgaria, the damask rose attaining its highest perfection there.

## THE OLD SWIMMING POOL.

BY RANDOLPH C. LEWIS.

Onk-shaded and tranquil the old swimming pool,  
A haven of limpid delight after school,  
Where knots in the trees were as stubborn as those  
We sometimes found meshing malignantly  
our clothes,  
While gnats and mosquitoes played hide-and-go-seek—  
With more of the hide than is proper to speak.

In manhood to be "in the swim" is the game;  
We yearn to be burned by the sunshine of fame  
As in boyhood, when, all a-dripping we'd run,  
And play a wild season at "tag" in the sun,  
While freckles were printed on cheeks and the nose,  
And other locations now hidden by clothes.  
—New York World.



"Pa, what is 'lese majesty'?" "Lese majesty," Jimmie, is telling the truth about kings while they are alive."—Chicago Record-Herald.

I humbly asked her for her hand,  
In accents bold yet calm,  
And nearly died when she replied:  
"You carry off the palm."  
—Philadelphia Record.

"You look nice enough to eat," he said admiringly. "Ah! now that you mention it," she replied, "I wouldn't mind eating a little ice cream."—Philadelphia Record.

"Say," snarled the conductor, "this quarter has a plug in it." "Well," snapped the fiery passenger, "did you expect to find an automobile in it?"—Philadelphia Record.

"I wonder how they ever became engaged." "Their accounts differ. She says he threw himself at her feet, and he says she threw herself at his head."—Brooklyn Life.

"You don't mean to say she has accepted him? He isn't at all her ideal!" "Well, it didn't take her long to choose between a fiancé in the hand and an ideal in the bush."—Puck.

Little Elmer—"Papa, what is the hand of Providence?" Professor Broadhead—"The hand of Providence, my son, is what we usually see in the misfortunes of others."—Puck.

My happiness would be complete  
With what I have if I  
Could know that no one else below  
The sky had more than I, and no  
One else stood quite as high.  
—Chicago Record-Herald.

"No," said Mr. Holtite, "I don't object to the time a man takes for a reasonable vacation." "To what is it that you object, then?" "The long rest he invariably needs after he gets back."—Boston Traveller.

Summer Belle—"There go two of the most disagreeable men I've met this season." Friend—"Are they? Why?" Summer Belle—"One of them stares me out of countenance, and the other won't look at me at all."—New York Weekly.

Floorwalker—"Good morning. You wish to do some shopping, I presume?" Bride (with hubby)—"Yes." Floorwalker—"Step into the smoking-room and the boy there will give you a check for your husband."—New York Weekly.

"Boys will be boys," quoted the apologist for the youngsters. "Boys will be nuisances, you mean," retorted the man whose garden had been wrecked. "Same thing," was the reply. "Working slightly changed, but the underlying idea is the same."—Chicago Post.

Mr. Bridal (at luncheon)—"Is this the best salmon you could get?" Mrs. Bridal—"Yes, the grocer showed me several kinds, but I took this can." Mr. Bridal—"Did he say this was the best he had?" Mrs. Bridal—"No, but it had the prettiest label."—Philadelphia Press.

Josh—"Abner's the greatest reader here at the Corners. An' that hain't all; he acts on what he reads." Lige—"Yew bet he does! Now, last week, ter my certain knowledge, he answered two advertisements of matrimonial bureaus, sent for three packages of love powder an' a book on hypnotism, an' he also sent a dollar ter a feller in New York for seventeen ways ter git rich in three months!"—Puck.

"Your services are no longer required!" said the great metropolitan editor to the reporter who had written up a sensational eulogium. "Why?" was the startled question. "Because you wrote up the eulogium of the waitress and the janitor without calling one a society favorite and the other a man of leisure and a well-known club man. Such carelessness for opportunities must be punished."—Boston Transcript.

## A Bankrupt Russian Town.

When a man becomes a bankrupt he is, of course, sold up. But there is only one country in the world where a town can share a similar fate. This is Russia. The town of Verdischev, a place of some 4000 inhabitants, was recently sold by auction to the highest bidder. It owed the Russian Government and other creditors a sum of 3,919,352 roubles, and was sold because it was unable to pay.—Tit-Bits.